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## PATENT SPECIFICATION



Application Date: March 6, 1923. No. 6441/23. 210,647

Complete Accepted: Feb. 7, 1924.

## COMPLETE SPECIFICATION.

Improvements in and relating to Devices for Stopping Leaks in  
Pipes and the like.

I, ERNEST CHARLES BALDWIN, of  
"Everton," 105, Albert Road, South  
Norwood, S.E. 25, a British subject, do  
hereby declare the nature of this inven-  
5 tion and in what manner the same is to  
be performed, to be particularly described  
and ascertained in and by the following  
statement:—

This invention relates to devices  
10 employed for stopping leaks or other  
openings in pipes and the like, of the  
kind consisting of two half cylindrical  
jaws hinged together at one of their longi-  
tudinal edges, and has for its object  
15 improvements whereby a self-contained  
device (without separate clamping means)  
that can readily be applied to a pipe, is  
provided.

The present improvements consist in  
20 providing each of the jaws with an out-  
wardly projecting part or heel on opposite  
sides of the hinge-pin and means of forc-  
ing them together or apart. According  
25 to one construction the hinge-pin passes  
through the eye of a bolt situated at a  
point between the said projecting parts.  
This bolt passes through a wedge-like  
block whose curved or inclined sides  
30 engage the adjacent faces of the afore-  
said heels and between which it is forced  
by a wing-nut or equivalent part screwed  
on to the aforesaid bolt when it is desired  
to clamp the improved leak-stopping  
35 device to a pipe or the like.

The inner surfaces of the jaws are pro-  
vided with a rubber or other elastic  
impervious pad which is clamped over  
the crack or opening in the pipe it is  
desired to stop.

40 According to a modified construction  
one of the heels may have a screw-  
threaded hole formed in it to receive a  
bolt provided with a milled or other suit-  
able head having a hemispherical or other  
45 suitable surface adapted to press against  
the other heel when it is unscrewed so as

to separate said heels and close the jaws  
when it is desired to stop a leaky pipe.

It will be understood that in some  
cases the heels of the jaws may cross so 50  
as to cause the jaws to be clamped to a  
leaky part when the said heels are urged  
together.

I am aware that it has heretofore been  
proposed to provide devices for clamp- 55  
ing various objects to tubular parts, con-  
sisting of curved jaws pivoted to each  
other and urged together by a cam or a  
setscrew pivoted or screwed into a pro-  
jection extending from one jaw adapted 60  
to act on a projection extending from  
the other but in none of these cases were  
the jaws provided with an impervious  
pad to stop a leak.

It has heretofore been proposed to pro-  
vide devices of the kind referred to with  
flanges at the outer edges of their hinged  
jaws which were adapted to be clamped  
together by loose bolts passing through  
65 said flanges and nuts but this arrange-  
ment was open to the objection that the  
bolts and nuts, which had to be removed  
before the device could be applied to a  
leaky pipe, were liable to be lost, and  
when in use the head of the bolt as well 70  
as the face of the nut could only bear  
evenly upon the flanges when used on a  
pipe of a given diameter.

I will now proceed to more particu-  
larly describe my invention with the aid 80  
of the accompanying drawings in  
which:—

Fig. 1 is a perspective view of the  
improved device,

Fig. 2 is an end elevation of the same, 85  
and

Figs. 3 and 4 are similar views to Fig.  
2 illustrating modified constructions.

According to the construction shown  
in Figs. 1 and 2 of the drawings, two 90  
half cylindrical jaws *a*, *b* of metal or  
other suitable material are hinged

together along one of their edges upon a pin *c*. The jaws *a*, *b* are each provided with a projecting part or heel *d*, *e* on the opposite sides of the hinge-pin *c* that 5 acts as a fulcrum when force is applied to the heels *d*, *e* so as to urge them apart and the jaws *a*, *b* towards each other for the purpose of stopping a leak.

In order to separate the heels *d*, *e* a 10 wedge-shaped block *f* is forced between them by means of the nut *g* screwed on to the bolt *h* which passes through a hole in said block. The bolt *h* is provided with an eye at its inner end through 15 which the hinge-pin *c* passes. The jaws *a*, *b* have an inner surface *i* of rubber or other elastic impervious material which is forced into intimate contact with the surface of the pipe when the nut *g* is 20 screwed on to the bolt *h*. In order to normally urge the jaws *a*, *b* apart when the nut *g* is unscrewed, a flat spring *n* in the form of a tube having a longitudinal slit may be provided between them 25 and the rubber surface *i*, or a wire spring wound on a convenient part of the hinge-pin may be provided for this purpose.

In use, the nut *g* is first unscrewed 30 causing the jaws *a*, *b* to separate. The device is then placed in position around the pipe to be stopped with the hole or flaw beneath one of the jaws *a* or *b*. The nut *g* is then screwed up so as to force 35 the jaws together and the rubber surface into contact with the walls of the pipe.

According to a modified construction shown in Fig. 3 one of the heels *d* or *e* may have a screw-threaded hole formed 40 in it to receive a bolt *k* provided with a milled or other suitable head *l* having a hemispherical or other suitable surface adapted to press against the other heel when it is unscrewed so as to separate 45 said heels and close the jaws when it is desired to stop a leaky pipe.

According to the arrangement shown in Fig. 4, one of the heels *e* has a bolt *k* hinged to it and the other heel *d* is provided with a hole through which the free 50 end of said bolt extends. The bolt is provided with a nut *m* by unscrewing which the heels are urged apart and the jaws *a*, *b* closed around the leaky part.

Having now particularly described and 55 ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. An improved device for stopping

leaks in pipes and the like comprising 60 two jaws having half-cylindrical inner surfaces hinged together characterised by each jaw having an outwardly projecting part or heel on the opposite side of its hinge-pin, an elastic impervious pad extending across the inner faces of said jaws and means of forcing said heels together or apart in order to close the jaws around a leak substantially as described in the specification.

2. An improved device for stopping 65 leaks in pipes according to Claim 1 characterised by a wedge-shaped block situated between the projecting heels of the jaws, a bolt pivoted to the hinge-pin and extending through a hole in said block and a wing or other suitable nut screwed on to said bolt and adapted to force said block between the heels of the jaws substantially as described in the specification.

3. An improved device for stopping 70 leaks in pipes according to Claims 1 and 2 characterised by one or more springs adapted to normally maintain the jaws 75 in their open position substantially as described in the specification.

4. A modified form of the device for 80 stopping leaks in pipes according to Claims 1 and 3 characterised by means of clamping the jaws together consisting in providing one of the heels with a screw-threaded hole to be engaged by a bolt whose end engages the other heel, said 85 bolt having means of rotating it substantially as described in the specification.

5. A modified form of the device for 90 stopping leaks in pipes according to Claims 1 and 3 characterised by means of clamping the jaws together consisting in providing one of the heels with a pivoted bolt and the other with a hole for such bolt to extend through and a nut on said bolt to urge said heels together or apart 95 substantially as described in the specification.

6. The combination and arrangement 100 of parts constituting an improved device for stopping leaks in pipes and the like, substantially as described in the specification and shown in the drawings.

Dated this 6th day of March, 1923.

EDGAR A. GODDIN,  
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61 & 62, Chancery Lane, London,  
W.C. 2,  
Agent for the Applicant.

Fig.1.

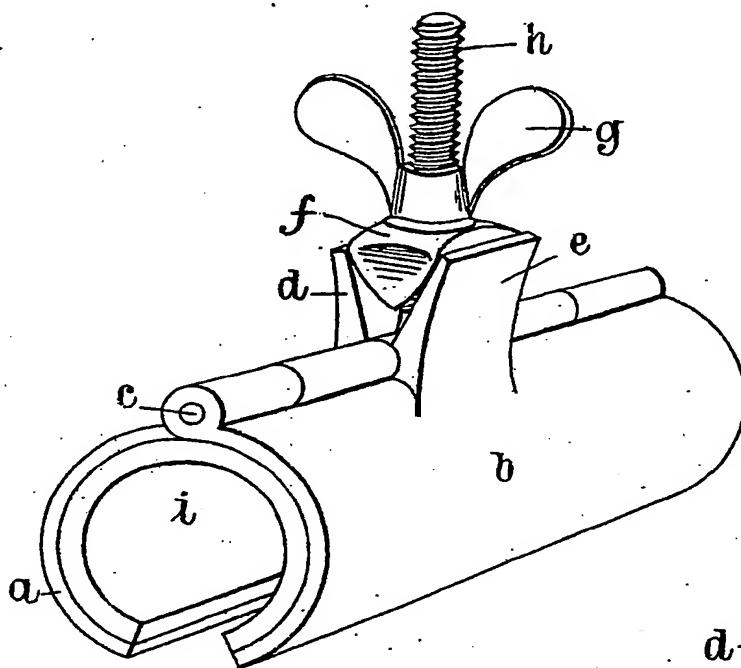


Fig. 3.

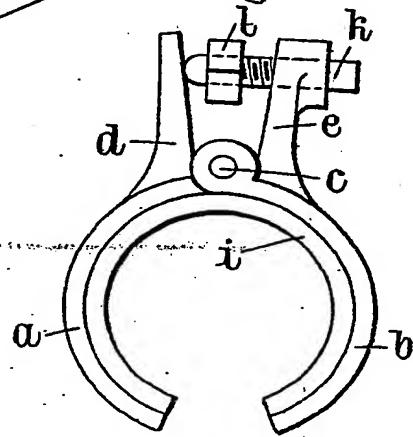


Fig. 2.

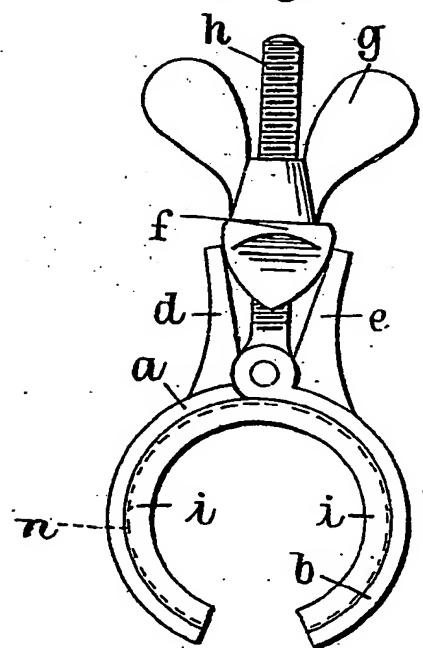
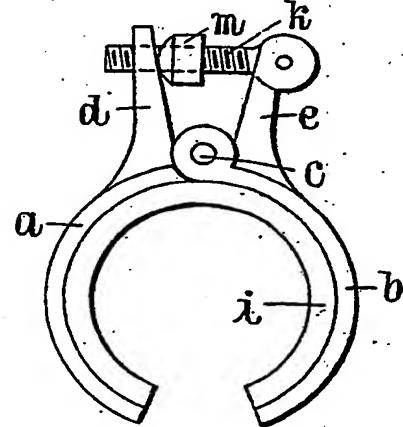


Fig. 4.



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